

WHAT IS CLAIMED IS:

1. An apparatus for integrated tool manufacture, comprising:

5 an input module means for making a supply of input objects accessible that serve to produce a description of a workpiece, there being one or more input parameters belonging to each input object, the input module means permitting the selection of input objects and inputting their input parameters and making a supply of measurement objects accessible, from among which measurement objects are selected and linked with input objects or input parameters,

10 display module means for visually displaying an image of a tool resulting from the chosen selection of input objects and the inputs,

machining program module means for generating from the chosen selection of input objects and the parameters to be input therefor, a machine control program serving to control a machine tool, and

15 measurement program module means which from the chosen selection of measurement objects and their linkage with input objects, serves a measurement program for controlling a measuring device.

2. The apparatus of claim 1 wherein each input object is linked with a machining operation, and the entirety of machining operations defines a machining task to be performed by the machine control program.

20 3. The apparatus of claim 1 wherein the display module means determines, from the selected input objects and the associated inputs, a geometric model, which defines the surface of a tool.

4. The apparatus of claim 1, wherein each measurement object is linked with a measuring operation, and the entirety of measurement objects and the associated links defines the measurement task to be performed by the measuring device.

5 5. The apparatus of claim 1 wherein the machine tool comprises a grinding machine.

6. The apparatus of claim 1 wherein the measuring device is integrated with the machine tool.

10 7. The apparatus of claim 1 wherein the measuring device comprises a measuring machine.

8. A method for controlling a machine tool and an associated measuring device, comprising the steps of:

15 A) actuating an input module for furnishing a supply of input objects which set up a description of a workpiece for selection, and one or more input parameters that are interrogated belong to each input object, and furnishing a supply of measurement objects for selection, and links of selected measurement objects with input objects are brought about;

 B) actuating a display module for displaying an image of a tool resulting from the chosen selection of input objects and the inputs;

20 C) actuating a machining program module for generating, on the basis of the chosen selection of input objects and the parameters input therefor, a machine control program which serves to control a machine tool; and

D) actuating a measurement program module for generating, from the chosen selection of measurement objects and their linkage with input objects, a measurement program for controlling a measuring device.

5 9. The method of claim 8 wherein there is determined, from the selected input objects, which are each linked with a machining operation, and from the associated inputs, a geometrical model that defines the surface of a tool.

10. The method of claim 9 wherein the geometric model is displayed.

10 11. The method of claim 8 wherein measurement object is associated with a measuring operation, and measurement parameters are defined on the basis of the selected input objects and associated input parameters.

12. The method of claim 9 wherein a measurement object is associated with a measuring operation, and measurement parameters are defined on the basis of the geometric model.

15 13. The method of claim 8 wherein inspection points are among the measurement parameters.

14. The method of claim 13 wherein monitoring is performed to determine whether inspection points are located on faces or edges of the geometric model.

20 15. The method of claim 14 wherein there is performed a request for correction is output, or an automatic correction.